LET US LEARN ABOUT OUR BODY AND HEALTH

A MANUAL FOR TRAINERS





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LET US LEARN ABOUT OUR BODY AND HEALTH

March 1996

The Carcher should conduct the session with the help of

INTRODUCTION

CHETNA (Centre for Health Education, Training and Nutrition Awareness) is an Ahmedabad based non-government organisation whose mission is to empower disadvantaged women and children so that they may gain control over their own, their family's and community's health.

In order to fulfill this mission CHETNA provides support through training functionaries of non-government organisations and government functionaries and prepares simple and graphic educational material in regional languages.

This booklet has been prepared to achieve one of the aims of the functional literacy drive. As a part of adult education, this booklet deals with subjects related to women's health and provides life useful education. The concept of this booklet took shape during a workshop held by the State Resource Centre of Rajasthan Adult Education Association in 1993. CHETNA prepared the exercise book based on it's own experiences in health and nutrition. This manual was prepared as an aid to the exercise book.

These two books were field tested during the training of volunteers of Adult Education Programme of Gujarat. This manual is a reference book for the teacher. Scientific information and methods of conducting sessions has been been given in the manual. The exercise book is for those learners who have completed the first and second level of literacy.

The teacher should conduct the session with the help of activities given in the manual. After this she should ask the trainees to read the exercise book. Ensure that all the trainees read it. This exercise book will be useful for any village woman or women's group to know more about one's body and health.

We hope that this booklet will be useful to you .

05438 TM-110 N96

CHETNA Team March, 1996

BALANCED DIET

Objectives

- To provide information on various nutrients present in foods and their functions.
- To understand nutrient needs of women and adolescent girls, from a social perspective.

METHOD

SUBJECT	METHOD
Information about nutrients	Activity 1 Group discussion,
To understand the nutrient needs of women and adolescent girls from a social perspective.	Activity 2 Group discussion

Content

The nutrients present in food and their functions

Adequate nutrition is essential for everyone to keep our body healthy and for its growth and development. Several nutrients are present in the food we eat. They perform different functions in our body.

- Provide heat and energy to our body.
- Bring about growth and development of our body.
- Protect our body from illness.
- Keep our blood healthy.
- Keep our eyes healthy.

FUNCTIONS OF FOOD



	Functions	Food
1.	Provide energy	All cereals and tubers, sugar, jaggery, oil and
2.	Growth and development	clarified butter (ghee). Milk and milk products like yoghurt and butter milk, pulses, groundnuts, meat,
3.	Protection from illness	fish and poultry. All vegetables, fruits, milk and milk products, meat, fish, poultry and
	EINEMEN HOGE CONSTITUTO	germinated cereals and pulses.
4.	Keeping blood healthy	Green leafy vegetables, jaggery taken alongwith sour fruits and germinated
5	. Keeping eyes healthy	pulses. Milk and milk products, yellow and orange fruits and vegetables, green leafy vegetables, egg and

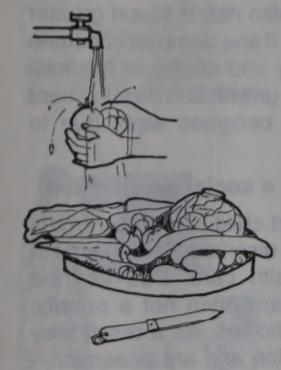
Increasing the nutritive value of food

We must eat a balanced diet everyday. We must eat foods which provide energy, bring about growth and development, protect us from illness and keep our blood and eyes healthy.

To increase the nutritive value of food:

- Prepare foods by mixing cereals and pulses in preparations.
- Germinate pulses.
- Ferment a mixture of cereals and pulses and make preparations like dosa, dhokla, khaman, idli, sour roti etc.





Preserving nutrients

Nutrients may be destroyed due to incorrect cooking methods.

Therefore we must remember the following:

- Those vegetables which can be eaten raw are best eaten as such.
- Wash fruits and vegetables before cutting them.
- Do not remove a thick peel from fruits and vegetables.
- Cover the vessel and cook on slow fire. Do not overcook food.
- Use only required amount of water to cook.
- Do not heat food repeatedly.
- Do not add baking soda to food.
- Keep cooked food covered.

Nutrient needs during adolescence, pregnancy and lactation

A variety of foods are necessary in our daily diet to provide all the nutrients for our physical and mental development.

The nutrient need increases during adolescence when there is a growth spurt and girls begin to have their periods. Different types of foods must be eaten during adolescence. The foods that must be specially included are energy giving foods like cereals, pulses, oil etc. and foods that keep the blood healthy i.e green leafy vegetables, germinated pulses, liver, jaggery etc.

The necessity for food also increases during pregnancy and lactation. Since the foetus grows in the mother's womb, it is essential for a woman to eat food in greater quantity especially cereals, pulses, milk and milk products, green leafy vegetables, eggs, liver etc during









pregnancy. Similary a woman also needs to eat greater quantity of food during lactation. If she does not consume a healthy diet then the quantity and quality of her milk reduces which in turn affects the growth and development of her child. The woman also becomes weak due to inadequate nutrition.

Malnutrition among women - a social perspective

The nutritional status of the girl child, adolescent girls and women is poor. Women are discriminated against in terms of food, work and health care. Due to their secondary status their needs are often not a priority. Women usually eat last and leftovers. As a result they remain in a poor state of nutrition and are anaemic.

During pregnancy a woman's nutrient needs are increased which are usually not fulfilled from the daily diet. Malnutrition becomes even more pronounced during lactation. This cycle of malnutrition continues throughout their lives. In order to break this cycle of malnutrition, we will have to make women aware of their nutrient needs, empower them so that they may be able to take their own decisions, encourage men and other members of the family to help in the household work. We must bring up children in such a way that they do not grow up learning gender stereotypes. We will have to make efforts in this direction and build a new society which is free of discrimination.



ACTIVITY - 1

GROUP DISCUSSION

Objective

To increase the knowledge of participants about foods and their functions.

Preparation

Collect the cereals, dals, vegetables and fruits which are grown/available in your region.

Ask the following questions at the beginning of the discussion.

What do you eat everyday?

Write the answers on the blackboard. In this way you will have prepared a list of local foods. Now ask "why do you eat this food"? Usual answers include "To stay alive", "for energy". A list of functions of food will be ready. Write the 5 functions of food as listed below.

- Provide energy to our body.
- Growth of our body and development of muscles.
- Protect our body from illness.
- Keep our eyes healthy.
- Keep our blood healthy.

After this, show the collected food items and discuss their functions. At the end of the discussion ask the participants to colour this activity in the exercise book (colour pencils, crayons, or water colours may be used).

ACTIVITY- 2 GROUP DISCUSSION

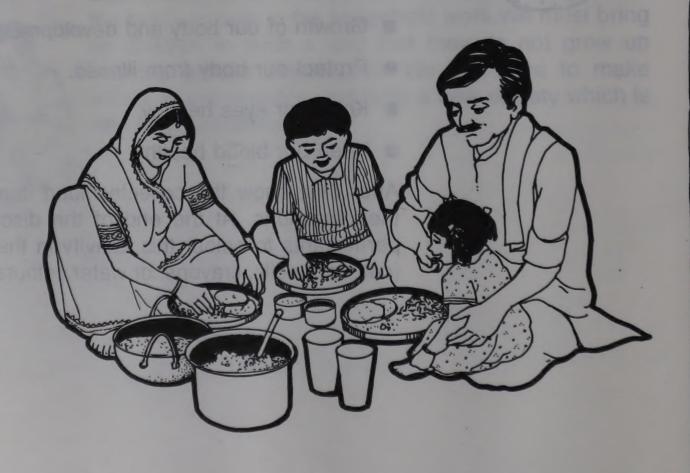
Objective

To understand the nutritional condition of girls and women from a social perspective.

Ask the following questions at the beginning of the discussion.

- What, how much and when did you eat today.
- Did you eat with the other members of the family or in the end, why?

Most women will say that they ate after feeding the other members of the family. Ask them the reason and allow them to reflect on it. Based on their answer discuss the nutrient needs of adolescent girls and women according to their daily work load. At the end of the discussion encourage them to eat with the other members of the family and to take sufficient nutrients in their diet.



ANAEMIA

Objective

- The causes, signs and symptoms and consequences of anaemia.
- To learn about the prevention of anaemia.
- To understand anaemia from a social perspective.

Method

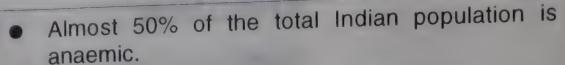
Subject	Method
Why does anaemia occur? To know its symptoms and consequences.	Activity 3 Role play and Song.
To learn about the prevention of anaemia.	Discussion-song.

Content

Anaemia

Our body is made of numerous cells which execute numerous functions through physiological actions and reactions. These cells require oxygen as a fuel which is supplied through blood. Our blood also transfers the byproducts of these reactions from the cells to lungs. The red blood cells which are found in our blood contain haemoglobin which carries oxygen.

Iron and protein are essential for the formation of haemoglobin. If we do not eat foods rich in iron and protein, haemoglobin will not be formed. As a result our body cells will not get enough oxygen. This will make us tired even if we do light work. This condition is called anaemia.



- Almost 70% Indian women are anaemic.
- Anaemia is the major cause of maternal mortality.

Symptoms of anaemia

- Feeling tired, dizzy and breathless even on doing light work.
- Paleness of the tongue ,nails and inner portion of lower eyelids.
- Flattening of nails.
- Swelling of feet.

Causes of anaemia

1. Dietary

We have discussed earlier that iron is required to make haemoglobin which is found in green leafy vegetables, jaggery and bajra. Vitamin C helps in iron absorption. In order to ensure adequate absorption of iron from these foods, it is necessary to eat sour fruits like guava, lime, amla, oranges, sweet lime etc. with it which are rich sources of Vitamin C. Even vegetables like cabbage may be eaten. Non vegetarian foods like meat, egg, liver and milk and milk products are also essential for making blood. If these foods are not eaten in required quantity a woman may become anaemic. Drinking tea immediately after meals hampers the absorption of iron therefore tea should not be taken alongwith meals.

There are several taboos related to diet during menstruation, pregnancy and lactation. Due to lack of information on anatomy several food items like milk, ghee and green leafy vegetables are not given as it is believed that these will accumulate on the surface of the baby's body which will lead to problems during delivery. These restrictions aggravate anaemia in an already malnourished woman.





2. Related to bleeding and menstruation

- Women may become anaemic if they bleed excessively during periods because of the loss of iron in blood and an inadequate dietary intake to replace this loss.
- Women lose blood during and after childbirth which may result in anaemia. Along with this there are several dietary restrictions during pregnancy which increase the risk of anaemia.
- Anaemia may also result due to excessive bleeding as a result of an accident.

3. Social causes

Women have a secondary status in the Indian patriarchal society. As a result of this most women lack self confidence and self respect and are unable to give priority to their needs. They eat after feeding the rest of the family as a result of which very little food is left for them. This is not sufficient when compared with the amount of work they do. Often their diet does not contain any vegetables or other nutritive foods. This is the main cause of malnutrition and anaemia in the Indian context.

Girls are given less food to slow down their growth. This allows some delay in their marriage. But this is the time when due to a growth spurt their nutrient needs increase and an inadequate diet results in anaemia.

From childhood a girl is taught to sacrifice for others, not to think of herself, to feed everyone else in the family first. This is the definition of a 'good woman' therefore she is conditioned to neglect herself. Repeated pregnancies, abortion etc., add to her poor nutritional state and she continues to remain anaemic all her life.

These aspects have been explained in Table - 1.

Some Other Causes of Anaemia

Illness Reason for anaemia

Malaria The red blood cells get

destroyed.

Hookworm Hookworms suck blood.

Menstruation or problems Excessive bleeding during

related to the womb. menstruation.

Piles Bleeding from piles.

Consequences of Anaemia

 The probability of illness increases due to increased susceptibility to infection.

 Low birth weight babies, birth of a dead baby, premature birth, maternal death.

Excessive bleeding during menstruation in adolescent girls.

 Lack of concentration amongst children, lagging behind in games and studies, lack of self confidence etc.

Treatment of Anaemia

Consumption of iron rich foods.

 Intake of iron tablets (100 tablets a year). These are available free of cost at the Primary Health Centre.

Take a course of medicines to destroy hookworms.

• If one is suffering from malaria, the course of tablets for malaria must be completed and iron tablets should also be taken.

 Raise the status of girls and women in the house as well as in the society. Encourage them to eat with the rest of the family so that they get adequate nutrition.

 Distribute work equally amongst all members of the family.



ANAEMIA - SYMPTOM OF A SOCIAL ILL

PARTIARCHAL SOCIAL STRUCTURE

Unequal Distribution of Resources and Decision-Making Power

Son Preference

Unequal distribution of Labour

Dicriminatory Traditional Beliefs and Practices

Men generally have control over both

Son to continue family line Son to take care of parents Son to perform last rites

Women have responsibility for productive and reproductive labour Women worklonger hours than men

Food taboos especially during menstruation, pregnancy and lactation

Life long Discrimination against Women

Malnourished women give birth to malnourished children and produce less breast-milk

Breast-feeding of girls is halted early

Girls eat last and least and yet do more work than boys

Girls do not reach full height and weight potential

Early marriage, early pregnancy

Amniocentesis, abortion, infanticide

Women do more work than men, yet receive less food

Discrimination continues into old age

ANAEMIA IN GIRLS AND WOMEN

ACTIVITY - 3 ROLE PLAY

Read the story given here and encourage participants to do a role play based on it.

Kamla is a student of standard VIII. She is very weak and remains lost.

One day all the girls go to the playground. All the girls play but Kamla sits in one corner. She joins in the game when forced by the teacher but soon gets tired and sits down again.

Teacher: What happened Kamla? Why don't you play?

Are you unwell?

Kamla: No, nothing is wrong, I am alright.

Teacher: What, "nothing is wrong". You are looking so weak. Tell me, what has happened.

Kamla: I get tired very easily. I don't feel like doing any work.

Teacher: Show me your nails, eyes and tongue (Teacher examines her nails, eyes and tongue). Kamla, your nails, eyes and tongue look very pale. It seems that you are anaemic.

Kamla: What? My mother has the same problem. She also gets tired very easily, looks pale and feels giddy. But she says that it is normal for women to feel like this. Why does this happen with all women?

Teacher: Our blood contains red blood cells, which transport oxygen to the cells of the body. Iron is an important constituent of red blood cells. If our diet is lacking in iron, we become anaemic. Kamla, tell me, what do you eat everyday.

Kamla: Roti (Indian bread) and pickle. Sometimes if vegetable is left, I eat that too.

Teacher: Do you eat green leafy vegetables and pulses?
Do you drink milk?



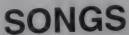
Kamla: No. These foods are either left in very small quantity or not left at all. I and mother eat last. Mother says that women do not need these foods.

Teacher: This is not right. We, women don't eat an adequate diet, that is why we become ill. I will explain to your parents also. From tomorrow you and your mother should eat with the rest of the family. You must especially eat green leafy vegetables like fenugreek, mustard leaves, bathua etc., and jaggery because these foods are good sources of iron. Besides this you must also have milk and milk products, all pulses (germination increases the nutritive value of pulses), fermented foods, eggs, mutton, liver and sour fruits everyday.

Since we have periods and give birth to children, our needs of iron are greater. Therefore it is necessary to have a nutritious, balanced and an iron rich diet.

At the end of the session ask the participants to practice the lesson on anaemia from the exercise book (page 7-8). Sing the songs given here with participants.





For women...

(Tune: Roses are red my love, violets are blue...)

You look so healthy, my dear

What is the Secret?

Eat leafy vegetables, sour fruits, with pulses and meat.

My family helps do the work, we sit together and eat.

That is the secret, my dear, to stay healthy and happy.

For men....

(Tune: In the morning by the sea..)

Men and women, shall share equally, responsibilities and resources.

Food and health care, home and water, equal work and equal wages.

For in-laws...

(Tune: Brown girl in the ring...)

A new bride in the house, tra la la lala,
like your daughter in the house, tra...la la la la
She looks for your love and support.
Share with her food and work, tra la la la la.
Equally, share with her food and work, tra la la la la la.
She will blossom with your love and support.

Mother to adolescent girl.....

Leafy vegetables, sour fruits and pulses if you eat
With meat, fish and eggs also.
healthy life shall you lead.
Food, rest, games and play are important any way,
With menstruation round the corner,
they will help you through those days.
Menstruation comes to us as a part of growing up,
Cleanliness and happiness, will help you brighten up.

(Tune: jingle bells, jingle all the way..)

The female reproductive system

Objective

- To provide scientific information about menstruation.
- To understand the beliefs regarding menstruation from a social perspective.



Subject	Method
Scientific information about menstruation.	Discussion
Beliefs about menstruation	Activity-4 Discussion, role play

Content

The structure of the female reproduction system.

In the female reproductive system some parts are present inside the body and some are outside. The parts which can be seen by us on the outer side include inner lips, outer lips, clitoris, vaginal opening and urinary opening. Internal parts include the birth canal, womb, egg sacs and egg tubes. The egg sacs contain eggs which start maturing between 12 to 18 years of age. The egg tubes are narrow through which the mature egg passes to reach the womb.

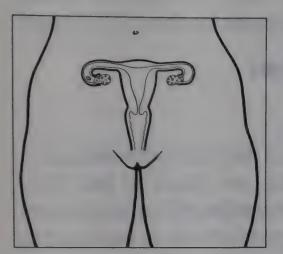
The womb is a pear shaped bag. Its function is to nourish and keep the fetus and give the fetus room for growth for nine months.

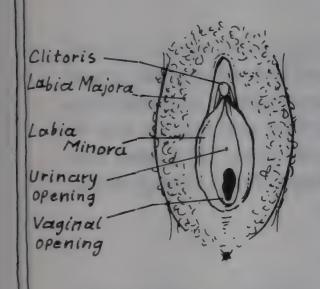
The passage which joins the outer reproductive organs to the inner organs is called the vagina (birth canal).

Menstruation

Menstruation (monthly periods) starts between 12 and 18 years of age. This is called menarche. This age may be different for every woman.

By forty five years of age a woman stops having periods. This is called menopause. The time of menopause also varies. Every month one egg is released from the egg sac which reaches the womb through the egg tubes. At this time if intercourse takes place a woman may conceive.









A thick layer of blood and mucus forms on the wall of the womb to nourish the fetus. If conception takes place then the fertilised egg comes and places itself on the wall of the womb.

If conception has not taken place then the layer of blood and mucus on the womb wall starts breaking and comes out of the vaginal opening. This process is called menstruation. The bleeding continues for about 4 to 5 days.

Care during menstruation

Diet

Several beliefs are prevalent about diet during menstruation. In several places milk and fruits are taboo at this time. Women lose blood every month therefore it is very important for them to eat a balanced and iron rich diet to replace this loss.

Mental Tension

A woman/girl may feel tense during menstruation. One of the reasons may be lack of complete information about periods. In several houses girls are made to sit separately, are not allowed to enter the kitchen and temple due to which they develop a sense of inferiority. Girls need love and sympathy at this time. It is essential to change these beliefs.

Cleanliness



Since the mouth of the womb (cervix) is open during menstruation, any infection can easily reach the womb and egg. It is necessary to bathe daily to prevent this. One should also wash the vaginal opening with soap and clean water. A clean cloth should be used for soaking menstrual blood. After use, it should be washed and dried in the sun. If the cloth used during menstruation is unclean there is a possibility of infection in the reproductive organs.

Women living in slums in cities do not have place to wash and dry the cloth, so they use any dirty cloth. By doing this there is a possibility of infection in the uterus. Infection may cause itching and boils may be present in the vagina.

Common problems related to menstruation

Delayed menstruation

The age of menarche varies in all girls. If a girl does not have her periods even after eighteen years of age then a doctor should be consulted. Often the reason is malnutrition or hormonal imbalance. Then it becomes necessary to take medical advice and take proper treatment.

Irregular menstruation

In the beginning, menstruation may be irregular due to hormonal imbalance or it may even stop for some time. There is no need to panic. This may become normal after some time.

During pregnancy, for some months after child-birth and after 45 years of age, it is normal for menstruation to stop.

Every woman has her own characteristic menstrual cycle. For some the cycle is of 28 days, for others it is 30 days or sometimes even 21 days. Menstruation may stop due to hormonal imbalance, tension or some unwarranted change. At such a time medical advice should be sought.

Abdominal pain during menstruation

Normally, during menstruation, slight pain is experienced in the abdomen, back and shin. This pain may be reduced by regular bowel movement, balanced diet, adequate rest and light exercise. Some herbal preparations are also beneficial in reducing pain.



- 1. Peel the leaf of "Kuvarpatha" (Aloe Vera) and eat the inner fleshy white portion for three menstrual cycles.
- 2. Prepare Chaturbeej"Churna" by roasting fenugreek seeds, black cumin, ajwain (seeds of Bishop's weeds) and asadiya (Garden cress seeds) lightly and powdering all of them together.

Consume one teaspoon powder of this mixture with warm water eight days before and also during menstruation. Continue treatment for three menstrual cycles.

Do not take this treatment during summer. If you bleed heavily by taking chaturbeej churna, stop the treatment immediately.

Tiredness and less bleeding during menstruation

Usually a woman becomes anaemic if she does not have a balanced diet. As a result she feels tired and has less bleeding during menstruation. To avoid this condition we should take a balanced diet containing green leafy vegetables, milk and milk products, pulses, germinated pulses, yellow and orange fruits and vegetables and sour fruits. Medical advice should be sought for continued inadequate bleeding during menstruation.

Irritability

Several women feel irritable or depressed before menstruation. This may happen due to hormonal changes in the body. One should be active and be involved in some interesting work. The members of the household should also be aware of this so that their attitude towards the woman/girl is one of sympathy.

Excessive bleeding during menstruation

A woman may have bleeding for more than 4 to 5 days or have two cycles in a month. In the absence of an adequate diet women may become anaemic. The reasons for excessive bleeding may be hormonal imbalance, uterine gland (a gland in the womb) tension or reproductive tract infection. Some women may also have this problem due to insertion of Copper-T. The cause should be found out and proper treatment taken.



The following Ayurvedic preparations may also be used.

- 1. Boil 3 or 4 leaves of the plant 'adusi' (Adathoda vasica) in a cup of water and boil till 1/4th remains. Drink this decoction regularly.
- 2. Take equal quantity (teaspoon each) of candied sugar (mishri) and fennel Seeds (saunf). Soak it in a cup of water at night and drink it on an empty stomach in the morning.

If you experience a change by the next cycle then continue treatment till 3 menstrual cycles. Consult a doctor if there is no change.

Common beliefs related to menstruation

The following are some of the common beliefs related to menstruation.

- Menstruation is dirty.
- A woman is polluted during menstruation and cannot go to the temple and kitchen.

Ask the participants about different beliefs. Try to discuss the irrelevant and harmful beliefs by sharing scientific information. At the end of the session ask the participants to practice (page 9 to 13) in the exercise book and make them do these activities.



ACTIVITY-4 ROLE PLAY

Objective

To sensitize on some of the beliefs related to menstruation.

(Characters - Sheela, Sheela's mother, grand mother and father).

(Sheela shows her red stained clothes to her mother),

Sheela : Mother, see what has happened to me.

Mother : O God, you have started your monthly periods. Take these clothes and go and sit

in that corner.

Grandmother: Why are you sitting in a corner?

Sheela : Mother told me to sit here.

Grandmother: O my God! Sheela's mother, has this girl

started her periods? I told you a thousand times to give her less food, but nobody

listens to me.

Mother : I was giving her less food. It seems just like

yesterday when we got her elder sister married and now this girl is also ready for

marriage.

Grandmother: Now tell her not to enter the kitchen and not

to come come near my pooja for four days.

Mother : Did you hear what your grandmother said?

Don't touch any eatables. Go and wash your stained clothes and after that start

making cowdung cakes.

Grandmother: Teach your daughter to wear an 'odhni',

walk slowly with lowered eyes and to stop

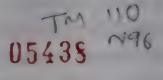
playing with boys.

Grandmother: (to Sheela's father): Look son, now search

for a boy and get this girl married.

After finishing this role play here, ask the following questions.

- What do Sheela's mother and grandmother believe about menstruation? Is this right?
- Is menstruation dirty? What will you do to change these beliefs about menstruation?
- What will you do to bring about a change in the society?







CONCEPTION

Objective

To provide information about conception.

Method

Subject	Method
How does conception take place? How is the sex of the child determined? The importance of diet during pregnancy and prevalent beliefs.	Discussion Discussion, Activity 5 Group discussion



How does conception take place?

The union of sperm and egg during intercourse leads to conception. Every month when the egg leaves the egg sac and comes into the egg tube, conception is likely if intercourse takes place. For a person whose menstrual cycle is of 30 days, the likely period of conception can be counted as follows:



If we start counting from the first day of menstruation, bleeding continues for 4-5 days. After this the egg is released from the egg sac on the eleventh or twelfth day. It takes four days to reach the womb. The greatest possibility of conception is between 11 to 18 days. If intercourse takes place during these days the sperms which are millions in number enter the vagina of the female. The sperms are highly motile and they swim upwards towards the egg in the egg tubes. Only one sperm unites with the egg. This is called fertilisation. The fertilised egg reaches the womb from the egg tubes. Cell division starts in the fertilised ovum before it lodges on the wall of the womb. Division takes place in multiples of two i.e. one to two, two to four, four to eight and a large mass of cells is formed. This mass of cells then lodges itself on the wall of the womb and starts growing.

Growth and development of the fetus

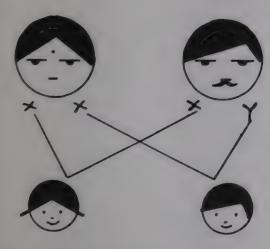
The outer layer of the fertilised egg becomes a sac like structure in which fluid accumulates. The fetus swims in this fluid.

The placenta and the umbilical cord are formed by the third month of pregnancy through which the fetus gets nutrition from the mother's body. The organs of the fetus are formed in the first three months of pregnancy. Hands, feet, eyes, ears and the brain all develop during this period. If a woman takes drugs or medicines without doctor's advice at this time it can harm the fetus. From the fourth month the fetus starts growing in size until delivery takes place in the ninth month.

Nutrient needs during pregnancy

When the child starts growing in the womb then the required nutrients reach the fetus from the mother's body through the placenta and umbilical cord. It is very important for her to eat a nutritious and adequate diet as she nourishes her self and her baby. A woman's diet should contain green leafy vegetables, milk and milk products, all kinds of cereals, pulses and oil seeds like groundnut and sesame seeds during pregnancy.

All local and seasonal fruits like amla, papaya, guava and ber (zizyphus) should be taken regularly. Fats and oils are also an essential component of the diet. By consuming one or two foods only limited nutrients will be available to the body. Therefore a woman should consume a variety of foods in adequate amounts to nourish herself and her unborn child.



Sex determination

The sex of the child is determined at the time of union of the sperm and egg. They contain pairs of chromosomes. The sperm contains two type of chromosomes i.e. X and Y whereas the egg contains only one type of chromosomes, X. At the time of union of the sperm and egg if X and Y chromosomes meet a boy is born whereas if X and X chromosomes meet a girl is born.

Patriarchal Society and Sex Determination

In our patriarchal society, the birth of a son is much desired. A woman who bears a girl child has to bear people's negligent behaviour and is forced to bear children until a boy is born. Amniocentesis tests (testing the fluid in the amniotic sac) for determining the sex of the child during pregnancy have become very common. Female foetuses are aborted because usually a girl is unwanted. Considering the fact that the male to female ratio in India is 1000:929 it is essential to stop this gory practice.

The Indian Government has put a ban on the use of this test to know the sex of the baby.

As responsible citizens we must realize that men and women, girl and boy are equal. They must get equal rights, care and love. We must try to bring awareness by disseminating information about sex determination.

At the end of the session ask the participants to do the exercise on page 14-17 of the exercise book.

Several other exercises have been given from page 18-21. Ask the participants to do these too.

ACTIVITY-5

A game of rice and pulses

Objective

To explain the process of sex determination.

Pre-preparation

Collect rice and pulses.

Activity

- Ask the participants to form 2 circles.
- Give some participants rice and some of them pulses and ask them to close their fist.
- Ask the participants to run in a circle until the bell rings.
 When the ringing of the bell stops they must make a pair with the partner in the adjacent circle.
- Open the fist of your partner and see if a girl or a boy is born.
- If both the partners have similar grains then it is a girl but if one partner has rice and the other dal then it is a boy. After the session ask the participants to do the exercise given on page 15 to 18 of the exercise book.

ACTIVITY-5

A game of rice and outses

Objective

to explain the process of sex determination

Pre-preparation

Collect rice and pulses

Activity

- Ask the participants to form 2 circles."
- Give some participants not and some of them purses.
- When the participants to run in a circle until the bett rings.

 When the ringing of the bell stops they must make a pair with the partner in the adjacent circle.
- Open the fiel of your panner and sas it a gut or a boy is bom.
- If poth the partners have similar quains then it is a girthout.

 If one partner has also and the other dal then it is a boy.

 After the session ack the participants to do the events a given on page 15 to 19 of the exercise book.

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